CATHOLIC UNIVERSITY COLLEGE OF GHANA

ASSESSMENT OF LOAN DEFAULT ON THE FINANCIAL PERFORMANCE OF KAASEMAN RURAL BANK LTD

ASIG HALIDU KOFI

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BY

ASIG HALIDU KOFI

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DECLARATION

Candidate's Declaration

I hereby declare that this dissertation is the result of my own original research and that no part of it has been presented for another degree in this University or elsewhere.

Candidate's Signature: …….. Date: …….....

Name: Asig Halidu Kofi

Supervisor's Declaration

I hereby declare that the preparation and presentation of the dissertation were supervised in accordance with the guidelines on supervision of dissertation laid down by the Catholic University College of Ghana.

Supervisor's Signature: …….. Date: …….

Name: Mr. Williams Awuma

ABSTRACT

The purpose of the study was to examine the effects of loan default on the financial performance of Kaaseman Rural Bank for the period 2009 to 2018. The study used the explanatory design as it sought to explain the extent to which loan default impact on the profitability of the bank. The study utilized only the secondary data from an accumulated published annual financial statements and reports of the Kaaseman Rural bank for the study period. Quantitative analysis with emphasis on descriptive and inferential statistics was used to analyse the data. In the analysis, correlation and multiple linear regression model were used to test the significance of the influence of the independent variable on the dependent variable. Findings on the composition of loan default at the bank showed that the Sub-standard Asset (SSA) constituted 21.0%, the Doubtful Asset (DA) also constituted 27.8% while the Asset Loss (AL) constituted 52.2%. The findings regarding the trend of Asset Loss component of the loan default of the bank for the period 2009 to 2018 showed that since 2011, there has been a downward trend of the Asset loss to 2014 until it went up in 2015 and 2016 and then declined from 2017 to 2018. The regression analysis showed significant relationship between loan default and financial performance as suggested by the ANOVA results ($p<0.005$). Specifically, the summary of individual independent variables impacting or influencing the financial performance (ROE and ROA) showed that there is no significant relationship between Sub-standard Asset and the banks performance at ($p<0.005$).

KEY WORDS

Default loans

Financial performance

Doubtful assets,

Sub-standard asset,

Loss asset,

Return on asset

Return on equity

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To my wife Marian Siedu, thank you for having confidence in me.

DEDICATION

To my wife Mariam Seidu and the entire family.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ACRONYMS

ADF	Augmented Dickey Fuller
EBIT	Earnings before Interest and Taxes
EPS	Earnings per Share
NPI	Net Operating Income
NAV	Net Asset Value
NPL	Non-performing Loans
OLS	The Ordinary Least Square Regression
PAT	Profit after Taxes
ROA	Return on Asset
ROCE	Returns on Capital Employed
ROE	Return on Equity
ROI	Return on Investment

CHAPTER ONE

INTRODUCTION

Loan portfolio is typically the largest asset and the predominant source of income for banks (Aballey, 2009). In spite of the huge income generated from their loan portfolio, available literature shows that huge portions of banks loans usually go bad and therefore affect the financial performance of these institutions. Banks make a greater part of their revenues and profit from lending activities (Karim et al., 2010; Nguta & Huka, 2013). As a result, when banks lose much of their lending capital to bad loans, it is likely that a greater part of their revenue is lost. Once revenue is lost in one financial year, the capability of the bank to provide access to credit facilities to other businesses and individuals would practically fall in the following financial years. The performance of a bank has linear relationship with the credit and recovery process (Asari et al, 2011). When this happens, the banks are unable to profit from credits in default. The study relating to validity of credit documentation (a medium to abstain defaults) has direct relevance to the performance of a bank. The provisions for loan defaults reduce total loan portfolio of banks and as such affects interest earnings on such assets. All over the world and in particular Ghana, the banking industry plays an important role in the development of the economy. Huge bad loans could therefore affect banks in the performance of this important role. Financial sector need to manage the credit risk inherent in the entire portfolio as well as the risk in individual credits and transactions. The effective management of credit risk is a critical component of a comprehensive approach of risk management and essential to the long term success of any financial organization. Since banks are more likely to be exposed to moral hazard and

adverse selection when advancing loans to borrowers, credit assessment of loan is inevitable. This should be done with a clear mind that there is great potential that most borrowers default.

Background to the Study

The financial sector is crucial to the economies of various countries, and banks remain a core of the sector, especially in developing economies where the capital market is not strong enough (Matthew & Laryea, 2012). The banking sector in Africa and the rest of the developing world has experienced major transformation in its operating environment. Banks play critical role in the sustainable development and growth of every economy. Banks contribute to the sustainable growth of every economy in diverse dimensions (Asantey & Tengey, 2014). One such critical role that banks play is the provision of credit facilities to businesses, households and individuals, and government in the form of Loans. In Ghana, the role of providing loan facilities in rural areas is dominated by Rural Banks (Antwi, Mills, Mills & Zhao, 2012). The banking sector plays a vital role in the economic growth of a country. Banks stimulate the flow of funds in the economy and fuels economic growth. The efficiency of banking system thus determines the pace of development of the economy (Araka et al., 2018). At the same time like any other business enterprise, the efficiency of a bank is evaluated based on profitability and quality of asset it possesses. Loans however expose the banks to the greatest level of credit risk (Nyaliet, 2017). Non-performing loans affect economic growth. Therefore, causes of loan default should be established so as to reduce the level of non-performing loans (Muriithi, 2013)

The study of profits is important not only because of the information it provides about the health of the economy in any given year, but also because profits are a key determinant of growth and employment in the medium-term. Changes in profitability are an important contributor to economic progress via the influence profits have on the investment and savings decisions of companies. This is because a rise in profits improves the cash flow position of companies and offers greater flexibility in the source of finance for corporate investment (Ayanda, Christopher & Mudashiru, 2013).

According to El-Maude, Abdul-Rehman and Ibrahim (2017), lending represents the heart of the banking industry. Loans are the most dominant assets and represent 50 to 70 percent of the total loan amount of most banks generate the largest share of operating income and represents the bank's greatest risk exposure. More ever its contribution to the growth of any country is huge in that they are the main intermediaries between depositors and those in need of funds for their viable projects (creditors thereby ensure that money available in the economy is always put to good use. Therefore, managing loans in a proper way not only has positive effect on the bank's performance but also on the borrower, firms and a country as a whole. Failure to manage loans which make up the largest share of bank's assets would likely lead to high level of NPLs which will eventually affect the financial performance of commercial banks.

Paudel (2012) stated that in Australia, the impact of credit risk management is loan default which eventually affect financial performance of commercial banks. The loan default rate is the most predator of banks financial performance in terms of profitability, ROA and ROE. The banks should

formulate strategies that will minimize the exposure of the banks to credit risk and enhance profitability.

The survival and performance of banks is of much interest to policy makers and shareholders, and also to researchers (Krakah & Ameyaw, 2010). Therefore, studies that seek to investigate the performance of banks and its determinants are vital to identifying the means of promoting the survival and growth of the sector that serves as the backbone of the financial system of developing economies (Matthew & Laryea, 2012).

Statement of the Problem

Loan portfolio constitutes the largest operating assess and source of revenue of most banks. However, some of the loan given out become non-performing or end up in default and adversely affect the financial performance of commercial banks. Research studies have shown that loan default have two main effect on commercial banks: these effects are the limitation of bank's financial performance and lending potentials. In foreign country context, this evidence is acknowledged by Karim et al. (2010), Obamuyi, (2007), Nguta and Huka, (2013), Nawaz et al., (2012), Fidrmuc and Hainz (2009) whereas Appiah (2011) and Awunyo (2012) also provides this evidence in Ghana.

The impact of loan defaults on banks have received attentions from various researches (Asantey & Tengey, 2014; Addae-Korankye, 2014; and Ntiamoah, Oteng, Opoku, & Siaw, 2014). However, the results have been mixed. While Asantey and Tengey (2014) study found that there is a high negative correlation between bad loans and lending potentials, return on investment and net profit, a study by Ntiamoah, et al. (2014) found that there is a high positive correlation between loan default rate and profitability.

Though these evidences on the effect of loan default on rural banks prevail, it is realised that the general contribution to academic debate on the subject is weak owing to the fact that studies on the subject are generally few. Again, Loan portfolio of banks or lending institutions is major assets that generate a significant amount of interest income. It plays critical role in determining the financial performance of banks and can therefore be said that the healthier the loan portfolio of banks, the better their financial performance. In the light of the importance of the health of the loan portfolio, it essential that a study be conducted to assess the determinants of loan default and its effect on financial performance of banks in Ghana. This study therefore, assesses the determinants of loan default and its effects on financial performance of rural banks in Ghana.

Purpose of the Study

The purpose of this study was to examine the effects of loan default on the financial performance of Kaaseman Rural Bank.

Research Objectives

Based on the general objective, the study sought to:

i. Identify the composition of loan default at Kaaseman Rural Bank Ltd.
ii. Examine the trend of loan default at Kaaseman Rural Bank Ltd.
iii. Examine the impact of loan default on financial performance of Kaaseman Rural Bank Ltd.

Research Questions

The main question is to what extent does loan default affect financial performance of Kaaseman Rural Bank? Other questions the study sought answers to include:

i. What is the composition or component of loan default at Kaaseman Rural Bank Ltd?

ii. What has been the trend of loan default at Kaaseman Rural Bank Ltd for the past ten years?

iii. What is the impact of loan default on financial performance of Kaaseman Rural Bank Ltd?

Research Hypothesis

H_1: there is a significant relationship between loan default and the banks performance.

H2: there is a significant relationship between Sub-standard Asset and the banks performance (Return on equity)

H3: there is a significant relationship between Sub-standard Asset and the banks performance (Return on asset)

H4: there is a significant relationship between doubtful Asset and the banks performance (Return on equity)

H5: there is a significant relationship between doubtful Asset and the banks performance (Return on equity)

H6: there is a significant relationship between Asset loss and the banks performance (Return on equity)

H7: there is a significant relationship between Asset loss and the banks performance (Return on asset)

Significance of the Study

The primary business of banks is financial intermediation—that is, using money provided by depositors to make loans to borrowers. Lending is inherently risky because the loans may not be paid back, resulting in financial

losses to the bank. Hence, banks are expected to have adequate capital to remain solvent even if some of the loans may result in significant losses. Profitability is key to any business because it allows the business to expand and provide more and a broader range of services to a larger number of people. As a network, RCBs have demonstrated an increasing trend in annual profits, with significant decreases only in two out of the past nine years. As with solvency status, however, not all RCBs are profitable.

The study is significant in many ways and would be beneficial to all stakeholders who are involved in credit or loan management. The board and management of Kaaseman Rural Bank Limited would find the findings of the study useful as it would help them evaluate their performance in loan management efforts over the years and subsequently design the appropriate strategies to manage credit so as to improve the profitability of the bank's loan portfolio. This study would help management to put a good mechanism in place to check those lapses in giving out and retrieving of loans and also assist both management and customers in understanding the new measures put in place.

Furthermore, stakeholders would be enlightened by demystification of key issues associated with loan management. Key issues such as: difficulties or challenges as well as pre-emptive solutions to loan affairs in rural bank.

The outcome of this study would enable banks in Ghana especially Kaaseman Rural bank to adopt workable strategies to control the problem of growing non-performing loans and thereby improve its financial performance and profitability.

Secondly, the findings of this study would serve as a tool to guide credit staff about the implications of their credit decisions in creating quality loan

portfolio for their banks. This would indirectly enhance the performance of credit staff in loan appraisals.

Again, academicians and researchers would benefit from this study in that they will be furnished with relevant information regarding loan default and its effect on financial performance. The findings would stimulate other researchers to venture into loan default management and proper credit appraisals. This would also contribute to the general body of knowledge and form a basis for further research.

This research work serves as a source of reference for successive students who would undertake a research on similar topics. The study shall also enable the researcher obtain fair knowledge of how rural bank administer and manage loan efficiently and effectively.

Delimitations

This study was restricted to investigating the impact of loan default on the financial performance of the rural banks in Ghana. The study focused primarily on loan default (measured sub-standard asset, doubtful debt and loss asset) and its impact on financial performance (measured by three variables including return on asset, and return on equity) on banks in Ghana. Kaaseman rural bank which is one of the largest rural banks in Ghana is used as a case study.

Limitations

The obstacles encountered in the study included financial constraints, inadequate time, challenges in the data gathering process and combining work with academics.

Because of financial challenges the researcher could not extend the study to other Rural Banks in the Brong Ahafo Region. Hence, the researcher chose Kaaseman Rural Bank Limited due to nearness of the branch. Consequently, the results or outcome of the study could not be generalized but confined to Kaaseman Rural Bank Limited in view of limited coverage.

The time allotted to the study was very short. As a result, a comprehensive study could not be carried out. As the period allocated for the completion of the whole study was affected.

The researcher is a worker and also a student and the difficulty in combining work with academics lies in the lack of total focus on one of these. The researcher therefore has a divided attention. And in a study of this nature maximum attention is required.

Nonetheless, the researcher tried as much as possible to minimise these limitations on the study to ensure a credible result of the study.

Definition of Terms

Loan: is a contractual promise between a lender and a borrower where the lender usually bank consent to the granting of an amount to a borrower, who intend undertakes to resettle same to the lender either in bulk or in installments within a specified period of time.

Default: occurs when a debtor has not met her/his legal obligations according to debt contract.

Loan default: is the inability to repay the loan by either failing to complete the loan as per the loan agreement or neglect to service the loan

Sub-standard Asset: is an asset classified as an NPA for less than 12 months.

Doubtful Asset: is an asset that has been non-performing for more than 12 months.

Loss Assets: are loans with losses identified by the bank, auditor, or inspector that need to be fully written off.

Financial performance: is a measure of how well a firm can use assets from its primary mode of business and generate revenues.

Organization of the Study

This study is organized into five chapters. Chapter one gives an introduction to the study. The chapter comprised the background to the study, statement of the problem, research objectives and questions, significance of the study, delimitations and limitations of the study, and organization of the study. Chapter two of the study reviewed relevant literature. Chapter three is about the methodology used in gathering the relevant data for the study. Sub-topics seen under this chapter are research design, study area, population, sampling procedure, data collection instruments, data collection procedures, data processing and analysis and chapter summary. Chapter four is about results and discussions. Chapter five looks at summary, conclusions and recommendations.

CHAPTER TWO

LITERATURE REVIEW

Introduction

This chapter presents the review of scholarly works on the subject matter all aimed at achieving the objectives of the study. Also contained in this chapter, and most importantly, are the relevant theoretical and empirical studies that have been carried out by other researchers in the field of credit management and the relationship it has with bank's profitability. Though most of the literature reviews are from external settings, it will serve as a guide to the current study.

Theoretical Framework

This study is guided by three relevant theories in the field of loan management including Asymmetry and Agency theories.

Asymmetry Theory

The theory of asymmetry information states that it may be difficult to distinguish between good borrowers and bad ones which may result into adverse selection and moral hazard problems. The moral hazard problem implies that a borrower has the incentive to default unless there are consequences for his future application for credit. This result from the difficulty lenders have in assessing the level of wealth borrowers will have accumulated by the date on which debt must be repaid. This theory explains that in the market, the party that possess more information on the specific item to be transacted is in a position to negotiate optimal terms for the transaction than the other party. The party that knows less about the same specific item to be transacted is therefore in a position of making either right or wrong decision concerning the transaction

Averse selection and moral hazards have led to significant accumulation of NPLs in commercial banks (Muriithi, 2013).

Agency Theory

The study is also underpinned by the Agency Theory (AT) which supports the opportunistic behaviour of individuals. In relation, Jensen and Payne (2006) explain that customers and investors alike would expect their bankers to respond favourably to their objectives for joining them in business. Banks as agents of their customers and investors try to put in place mechanisms that seek to align the interest of the agent and the principal. All parties in their own self-interest are at the same time motivated to maximize organizational values (Francis, 2009). Mechanisms used to address agency problems as far as banks profitability is concerned to include effective loan portfolio management to minimize the incidence of bad loans and thereby to maximize profitability which in essence safeguards the worth of stakeholders (Jensen & Payne, 2006).

The Concepts of Loans

A loan is usually available on a fixed and spot basis and can be secured or unsecured. Loans are offered for specify amounts for specified periods. Mabvure et al. (2012) described loans in general are part of or major component of the total assets of every bank. The lender cannot seek repayment prior to expiry of the period unless there have been some default. In a legal sense, a loan facility is a contractual promise between a lender and a borrower where the lender usually bank consent to the granting of an amount to a borrower, who intend undertakes to resettle same to the lender either in bulk or in installments within a specified period of time.

Concept of Loan Default

According to Araka et al. (2018), default occurs when a debtor has not met her/his legal obligations according to debt contract. Loan default can be defined as the failure of a borrower to pay his/her loan as at when due (Balogun & Alimi, 1988). Loan default is the inability to repay the loan by either failing to complete the loan as per the loan agreement or neglect to service the loan (Otoo, Takyi Appiah & Wiah, 2015). In finance, default to occurs when a debtor has not made his or her legal obligations according to the debt contract (Murray, 2001). According to Pearson and Greeff (2006), loan defaults a risk that hold that describes the point in the borrower's repayment this tory where he or she missed at least three (3) instalments within a twenty-four (24) month period.

Types of Loan Default

Zablon, Sambiri, and Otieno (2015) reviewed various types of loan defaults. Their review is adopted for this study as it falls within the purview of the study. Zablon, et al (2015) indicated that default can be of two classes. These are technical default and debts services default. Debt service (servicing) default is where the debtor has not made a scheduled payment of interest or principal. Technical default occurs when an affirmative or a negative covenant is violated (Zablon, et, al, 2015). Zablon, et al (2015) explained that affirmative covenants are loan contracts clauses that require the borrower to achieve and sustain some accounting ratios performances over a period normally the loan period. Some of these accounting ratios include net worth, liquidity, and debt service coverage. However, some of these restrictions are frequently violated (Zablon, et al, 2015). On the other hand, negative covenants are those clauses that proscribe certain actions by the borrower that can impair the creditor's position

such as unable to retrieves lend amount through sale of secured asset. Some of the negative covenants include the prohibition on mortgaged asset disposal, and restrictions on dividend payments. Negative covenants are not frequently violated as affirmative clauses (Zablon, et al, 2015). This situation may be due to the fact that affirmative clauses relate to financial ratios performance which is difficult to predict and maintain given the turbulent economic and business frontiers. Most lenders include a clause that makes total outstanding debts becoming immediately payable on the first instance of payment default (Zablon, et al, 2015). Defaults can be classified into five main groups. These are sovereign, orderly, strategic, sovereign strategic, and consumer defaults (Zablon, et al, 2015).

Causes of Loan Default

Default occurs when a debtor has not met her/his legal obligations according to debt contract. The causes of loan default include; the types of loan offered, term of the loan, interests rate on the loan, poor credit history, borrowers' income and transaction cost of the loans. High interest rates on the loans by the Microfinance institutions have been discovered to be the reason behind the alarming loan default. Most of the default arose from poor management procedures, loan diversion and unwillingness to repay loans among others because of this the lenders must give various institutional methods that aim to reduce the risk of loan default (CBK, 2016). Korankye (2014) stated that the causes and control of loan default or delinquency in Microfinance Institutions in Ghana include: high interest rate, inadequate loan sizes, poor appraisal, lack of monitoring of the borrowers and improper client selection.

Another cause is the illness of the borrower: Under certain circumstances, the borrower instead of repaying the loan he/she uses the funds for medical expenses instead of the intended purpose. This can be seen in the illness or such diseases such as HIV and AIDs, cancer which can be very expensive to treat. Due to illness, such borrowers will find it difficult to honor their loan obligations. In many cases where the borrower is terminally ill or dies, the borrower may end up not repaying the loan in good time or not repay it at all. This kind of problem could be more pronounced in cases where the borrower is either an individual or a principal partner of a company. The general health of the borrower should be taken into consideration and health of a close relative (Nyaliet, 2017).

Financial Performance

Organisations pursue different goals to achieve their performance objectives (Greve, 2003; Hauser & Katz, 1998). The financial performance concept originates from organisational performance, strategic management and financial accounting studies, and measures firms' performance. The European Central Bank report (2010) defined bank performance as its capacity to generate sustainable profitability. It stated, subsequent to the spectacular losses in the financial crisis and the substantial government intervention, there is little public support for banks returning return on equity (RoE) ratios of well above 20%, as these have mostly proved to be unsustainable (European Central Bank, 2010).

Financial performance is also a measure of how well a firm can use assets from its primary mode of business and generate revenues. This term is also used as a general measure of a firm's overall financial health over a given period of time, and can be used to compare similar firms across the same

industry or to compare industries or sectors in aggregation. There are many different ways to measure financial performance, but all measures should be taken in aggregation. Line items such as revenue from operations, operating income or cash flow from operations can be used, as well as total unit sales (Business Dictionary, 2011).

According to Palečková (2014), the financial performance of banks guides to analyses the outcomes of a firm's policies, performance, efficiency and effectiveness in monetary terms. These results reflect in the firms return on investment, return on assets and profit earning. It also emphasizes on how a bank is effectively utilizing its financial and other resources to earn profit. Hawaldar et. al. (2016) argue that financial performance evaluation is a subjective measure to assess firm's usage of assets from its primary mode of business and generation of revenues. It also includes net operating income (NPI), earnings before interest and taxes (EBIT), profit after taxes (PAT) and net asset value (NAV). This also measure of how efficiently a bank uses its assets and other resources to generate revenues, which intern firm's overall financial condition for a given period, and can be used to compare industries with each other's. Finance and its function play a very significant role in determining the profitability and stability of the business (Hawaldar et. al., (2016).

Measuring Financial Performance

The 'financial performance' domain examines indicators such as sales growth, profitability, ROI, ROA, ROE and Earnings Per Share (EPS), which reflect directly on the firm's economic objectives. Arguably, this comprises the quantitative elements usually found in strategy research. This research accepts

the financial performance framework as it reflects similar measurement indicators in other studies (Keisidou et al., 2013; Chi & Gursoy, 2009). There are two broad approaches used to measure bank performance, the accounting approach, which makes use of financial ratios. Traditionally accounting methods primarily based on the use of financial ratios have been employed for assessing bank performance (Ncube, 2009). In his contribution to profitability ratios, Thachappilly (2009) stated in his article the Financial Ratio Analysis for Performance evaluation that profitability ratios help to evaluate the performance of a company, so that investors can decide whether to invest in that company. This study measured performance using financial ratios as the indicators. Specifically, the study was limited to ratios such as Returns on Asset (RoA), Returns on Equity (RoE), and Returns on Capital Employed (RoCE).

Effects of Loan Default

At large, the main effect of bad loans on banks is the fact that increasing bad loans limit the financial growth of banks (Karim, Chan & Hassan, 2010; Kuo et al., 2010). This consequence is as a result of the fact that bad loans deprive banks of the needed liquidity and limit their capability to fund other potentially viable businesses and make credit facilities available to individuals. Karim et al. (2010) argues that there are a lot of other viable businesses that the bank cannot explore as a result of the fact that its funds are caught up in bad loans. In the face of these consequences, the bank experiences a shortfall in generated revenues (Ghana Banking Survey, 2013), and this translates into reduced financial performance (Karim et al., 2010; Nawaz et al. 2012; Ghana Banking Survey, 2013).

Another basic effect of bad loans on the bank is a reduction in the bank's lending potential (Karim et al., 2010). Though this has been acknowledged earlier, it is important to discuss it as a primary independent effect. Banks make a greater part of their revenues and profit from lending activities (Karim et al., 2010; Nguta & Huka, 2013). As a result, when banks lose much of their lending capital to bad loans, it is likely that a greater part of their revenue is lost. Once revenue is lost in one financial year, the capability of the bank to provide access to credit facilities to other businesses and individuals would practically fall in the following financial years. This means that the bank would fail to lend, or it would reduce its amount allocated to lending in the next financial year. In this study, the amount located to lending is referred to as annual "loan size".

Research studies have shown that the effect of bad loans on the bank in terms of net financial performance (i.e. return on investment/net profit) and lending potential (i.e. annual loan size) is practical and realistic. These studies would be identified from the perspectives of foreign countries and Ghana. The studies of Karim et al. (2010), Obamuyi, (2007), Nguta & Huka, (2013), Nawaz et al., (2012), Fidrmuc & Hainz (2009), Chelagat (2012) and Aballey (2009) provide such evidence in a foreign country context. Apart from the report in Ghana Banking Survey (2013), a few other studies (Appiah, 2011; Awunyo-Vitor, 2012) have shown that bad loans negatively influence banks in terms of financial performance and lending potential in Ghana.

The performance of a bank has linear relationship with the credit and recovery process (Asari et al, 2011). Asari et al. (2011) rightly argued that banks are unable to profit from credits in default. The study relating to validity of credit documentation (a medium to abstain defaults) has direct relevance to the

performance of a bank. The provisions for loan defaults reduce total loan portfolio of banks and as such affects interest earnings on such assets. This constitutes huge cost to banks. Study of the financial statement of banks indicates that unsecured loans have a direct effect on profitability of banks. This is because charge for bad debts is treated as expenses on the profit and loss account and as such impact negatively on the profit position of banks (Price Water-House Coopers, 2009).

Rural Banks of Ghana

Rural banks are entity banks which belong and directed by people living in the community. These banks are recorded under the company code and are accredited by the Bank of Ghana to participate in banking business. Per the company code, these are not allowed opening branches throughout the country but are allowed to open agencies within their areas of operations. The key functions of these banks are saving mobilization and provision of credit facilities to reliable clients within their catchment areas. The aim reason why the Bank of Ghana licensed these rural banks is to serves a way of developing the rural areas within the country.

According to Abledu, Akuffo, Adade and Kwofie (2016), Ghana's Rural Bank scheme was initiated in 1976, under the auspices of the Bank of Ghana (the country's central bank). The purpose of this program was to serve small borrowers and savers in rural areas, who at the time had essentially no access to institutional savings and credit facilities. RFM specialists would recognize in this program many elements of the Directed Credit Approach. For its time, however, the Rural Bank project was relatively well thought out. Many features of this program, indeed, foreshadowed the yet-to-be developed Financial

Systems Approach to RFM intervention. During its first decade of operations, the Rural Bank program proved, in general, to be a success. By the late 1980s, however, many individual Rural Banks were floundering. The government attempted to reinvigorate the programmme via a macroeconomic Financial Liberalization effort initiated in 1988 and a comprehensive Rural Bank restructuring exercise begun in 1991.

Empirical Review

The impact of loan defaults on banks have received various researches (Asantey and Tengey, 2014; Addae-Korankye, 2014; and Ntiamoah, Oteng, Opoku, and Siaw, 2014). However, the results have been mixed. A study by Abaidoo (2015) to examine the determinants of loan default and its effects on financial performance of commercial banks in Ghana by using Fidelity Bank Limited as a case study. The study employed quantitative and qualitative research techniques as the research design. In achieving the research objectives primary and secondary data was used. The primary data was collected through a well structured questionnaire. Simple random technique was used to select 120 loan clients and a purposive sampling was used to select a credit staff. The data was collected from four branches of Fidelity Bank in the Brong Ahafo Region of Ghana. It was realized that the delays in loan approval, poor management, poor credit appraisal and diversion of loans are the main determinants of loan default in Fidelity bank. The study also found that SME clients (49.5%) defaults more than Agric, personal and salary loan clients. The major cause of loan default according to the findings of this study was decrease in demand of goods and service (16.1%) sold by the loan clients. Again, it was realized that loan default has a negative impact on profitability.

Another study by Nsobilla (2015) investigated the effect of non-performing loans on financial performance and trend of incidence of non-performing loans. Secondary data with reference period of 2004-2013 were collected from six selected rural Banks in both the Ashanti and Western Regions of Ghana between. The Ordinary Least Square Regression (OLS) was employed to estimate the effect of non-performing loans on financial performance. The polynomial function was employed to determine the trend of the incidence of non-performing loans. The results of the OLS revealed that nonperforming loans, cost-income ratio, loan recovered and total revenue were all statistically significant at 1% significance levels respectively. The liquidity risk was not statistically significant. The non-performing loans and cost-income ratio had a negative influence on financial performance whereas total revenue and loan recovered had a positive effect on financial performance.

Ntiamoah, Oteng and Opoku (2014), examined Loan default rate and its impact on profitability in financial institutions. Their study adopted both qualitative (case study) and quantitative methods respectively. Financial institutions were selected to gather data, which was acquired from answers obtained from our administered questionnaire and through interviews. Hypothesis of the study was analysed using correlation and regression: Results of the study show that there is high positive correlation between the constructs of loan default rate and profitability of the various micro-finance institution. The statistical finding showed significantly that proper management of loans given to client will yield more profit for the firm.

According to a study by Asantey and Tengey (2014), there is a high negative correlation between bad loans and lending potentials, return on

investment and net profit. According to them bad loans accounts for 67.9% of the variation in lending potential while it accounts for 84.1% of the variation in net profit. A study by Awo and Akotey (2012) on Naara Rural Bank also testified to the negative relationship between NPLs and financial performance. The authors discovered that a one (1) percent increase in NPL of Naara Rural Bank (NRB) reduces the bank's profitability by about two (2) percent. The author further added that NPL erodes NRB's financial performance at a faster rate than additions made to it by the loans and advances made within the studied period. This explains why the loans portfolio NRB increases its profit level marginally by just 0.003 percent.

A study by Otoo, Takyi-appiah and Wiah (2015) which sought to determine the trend and forecast loan default at Minescho Credit Union, Tarkwa. A secondary data from the Credit Union was analyzed using Regression Analysis and the Box-Jenkins method of Time Series. From the Regression Analysis, there was a moderately strong relationship between the amount of loan default and time. Also the amount of loan default had an increasing trend. The two years forecast of the amount of loan default oscillated initially and remained constant from 2016 onwards.

Research Gap

Despite the above research-related evidences on the effect of bad loans on banks, it is realized that the general contribution to academic debate on the subject is weak. This is because studies on the subject are generally few, and most of them provided their evidences based on meta-analysis and literature reviews. The same gap is identified with studies conducted in a Ghanaian context. However, a lack of related studies in a Ghanaian context is direr. The

special interest of the researcher in this study is to provide related evidence using secondary data and empirical analysis, which provides a more valid and verifiable estimation of the effect of bad loans on banks.

Conceptual Framework of the Study

The research model of this paper was shaped from two comprehensive variables including loan default and bank's performance. Based on theoretical background and review of the previous literature, a conceptual model is developed to examine the impact of loan default on bank's performance. Figure 1 presents the research model.

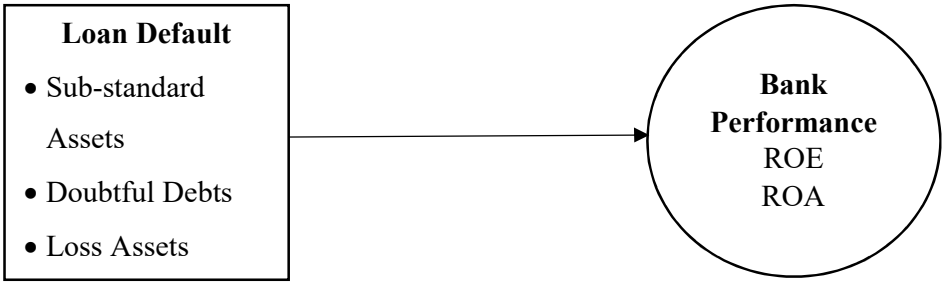

Figure 1: Conceptual framework

Source: Author's construct (2020)

Explanation of the Framework

Research studies have shown that the effect of bad loans on the bank in terms of net financial performance (i.e. return on investment/net profit) and lending potential (i.e. annual loan size) is practical and realistic. The studies of Karim et al. (2010), Obamuyi, (2007), Nguta & Huka, (2013), Nawaz et al., (2012), Fidrmuc & Hainz (2009), Chelagat (2012) and Aballey (2009) provide such evidence in a foreign country context. And in the Ghanaian context, the Ghana Banking Survey (2013); Appiah, 2011; Awunyo-Vitor, 2012, have

shown that bad loans negatively influence banks in terms of financial performance and lending potential in Ghana.

The first component of the framework talks about the independent variable considered in this study is seen as the loan default which are measured using Sub-standard Assets, Doubtful Debts and Loss Assets.

This research accepts the financial performance framework as it reflects similar measurement indicators in other studies (Keisidou et al., 2013; Chi & Gursoy, 2009). Therefore, in this study the performance or success of the rural bank is assessed by using the three performance measures; the market measures (ROE), and financial measures (ROA). This decision is also aligned with Rahman (2001) which cited that a combined measure using revenue, profit and other variables would be appropriate to assess performance.

Chapter Summary

This chapter discussed three relevant theories in the field of loan management including Asymmetry and Agency theories were discussed. The next chapter describes the research methodology that were used for the study. Broad concepts were reviewed including loans, loan default, financial performance and indicators or measures of financial performance. A review of related studies constituting the empirical review have been done and gaps identified for which the study have been situated. A conceptual framework has been designed to reflect the various variable that the study hinges on, thus, loan default as the independent variable and financial performance as the dependent variable. The next chapter, chapter four presents the research methods for the study.

CHAPTER THREE

RESEARCH METHODS

Introduction

The purpose of this study is to examine the effects of effective credit management on the profitability of Kaaseman Rural Bank Limited, the following methodological processes were followed to achieve this goal of the study. It presents in detail the research design, target population, sample and sampling methods, sources of data and process of data collection as well as the methods of analyzing the data collected.

Study Design

Research design is the blueprint of the whole study. The aim of research design is to guide the researcher through the process of collecting; analyzing and interpreting data (Yin, 2009). Yin (2009), identifies three conditions that determines the choice of an appropriate research design. These conditions include; the type of research questions asked, the researcher controls over actual behavior and the focus on current happenings. The aim of research design is to guide the researcher through the process of collecting, analyzing and interpreting data (Yin, 2009). For this work, the quantitative research design was used with survey (descriptive) and explanatory strategies to examine the effects of loan default on the profitability of Kaaseman Rural Bank Limited. The use of this design was necessary because descriptive research encompasses the collection of a wide range of indicators and economic information. The choice of a descriptive design is based on the premise that the researcher seeks to gain an in-depth understanding of the trend of loan default at Kaaseman Rural Bank. On the other hand, the study used the explanatory design as it seeks to

explain the extent to which a loan default impact on the profitability of the bank. According to Saunders, Lewis and Thornhill (2012), Explanatory research seeks to understand and explain a phenomenon, and it establishes causal relationships between variables. Explanatory research emphasises on studying a situation or problem in order to clarify relationships between variables (Saunders, Lewis, & Thornhill, 2012). Explanatory research is designed to test whether one event causes another (Hair, Babin, Money, & Samouel, 2003).

Study Setting (Profile of Kaaseman Rural Bank Limited)

Kaaseman Rural Bank Limited was commissioned on the 12th of November, 1987 as the 116th Rural Bank in the country. It is a service provider in Rural Financial intermediation. Kaaseman Rural Bank Limited was incorporated on the day of October 1987 and commenced business on the 14th day of July 1989. The bank further received a license to operate the business of banking under the then banking Act, 1970 (Act 339) on the 2nd day of November 1987 now reversed as the Banking Act 2009. Kaaseman Rural Bank Limited was designed as a rural development Bank with a strategic focus on the development of rural people through the purchases of cocoa, shea nut and micro savings and finance (KRB portfolio analysis report, 2013). The bank has its headquarters located at Sefwi Kaase in the Bia East District of the Western Region. The bank currently has seven (7) agencies cutting across six (6) Administrative Districts of the country namely: Debiso, Oseikojokrom and Yawmata agencies all in the Bia West District of the Western Region. The others are Dormaa agency in the Dormaa Municipality, Berekum agency in the Berekum Municipality, Sunyani in Sunyani Municipality and Drobo agency in the Jaman south District all in the Brong Ahafo Region.

The bank has a vision of being the most efficient rural bank and leading poverty reduction agent in Ghana. It aims to accomplish its vision through the provision of innovative products, the usage of modern technology, well-trained and motivated staff who are proactive to customers' needs. Some products and services of Kaaseman Rural Bank Ltd include: demand deposit account, savings account, time deposits account, "Susu" deposits account, call account, western union money transfer, MoneyGram money transfer, MTN money transfer, Voda cash money transfer, Apex link money transfer and microfinance.

Population

According to Cooper and Schindler (2003), a study population refers to the entire group of people, events or things of interest that the researcher wishes to investigate. The target population of the study was all the various years financial statements of Kaaseman Rural Bank Limited.

Sample and Sampling Procedures

A sample is defined as the segment of the population that is selected for research (Bryman & Bell, 2007). In simple terms, it is a subset of the population. For this study, the sample size was ten years (2009 –2018) annual financial report data from the Kaaseman Rural Bank Limited.

Non-probability sampling technique was employed in the sample selection. Non-probability sampling according to Saunders, et al. (2007), is "a sampling technique to which units of the sample are selected on the basis of personal judgement or convenience. In this regard, convenience and purposive sampling techniques were used.

First, the convenience sampling was used to select the Kaaseman Rural Bank for the study. With this method, sample is chosen for ease or convenience rather than through random sampling.

The second stage involved the sampling of the number of years from the sampled rural bank. Purposive sampling under the non-probability sampling method was used to select the number years for the study. The power of purposive sampling is to select information-rich participants (Patton, 1990). They were considered as being in the position with the required information to answer the research questions.

Data Collection Instruments

The study utilized the secondary data. The data was an accumulated published annual financial statements and reports of the Kaaseman Rural bank filed with the Bank of Ghana. The dataset was drawn from the financial reports throughout the period of study. With the secondary data collected, returns on assets and equity for the relevant years will be computed. The financial reports were obtained from the banks' websites, containing information on financial status, executive summary and financial measurement indicators. Within the reports, loan default and financial performance information were extracted, which forms the content analysis data. The researcher collected ten years (2009 –2018) annual financial report data.

Validity and Reliability

Reliability and validity methods are used to measure the soundness of the measurement to ensure they are free from bias and distortion (Golafshani, 2003). Reliability has been a major challenge associated with secondary data (Vartanian, 2011). Reliability indicates the measurement is accurate, precise

and consistent (Saunders, Lewis, & Thornhill, 2012). To attest the reliability of the data collected, figures for the annual loan default and profitability ratio variables collected was compared with the figures from the Bank of Ghana data sources to confirm that they were synchronized.

Data Collection Procedures

A letter from the business school was initially taken and sent to the management of Kaaseman Rural Bank Limited. Also, an assurance was given that the information is for academic purpose and that the data was handled professionally. Receiving the consent of people in authority such as the management has been recommended (Flynn et al., 1990). The management of the bank was contacted through face-to-face, where the researcher explained the purpose of the study to them and asked whether they could grant permission to conduct the study in the hospital.

Data Analysis

The secondary data obtained was scrutinized to determine their suitability, reliability, adequacy and accuracy. Ratio analysis was also used to compute the profitability ratios (return on assets and loan loss ratio) from the data gathered from the annual reports of the bank selected for the study. With the help of STATA linear regression was computed to establish the relationship between loan default and its effect on profitability.

The author used ANOVA analysis to test the data for ten (10) years, 2009 to 2018.

Theoretical Model

The study used both regression and times series data for this analysis to determine the effect of loan default on bank performance.

Time Series

Times series is an ordered sequence of values of a variable at equally spaced time intervals (Otoo et al., 2015). It is mathematically defined as a set of vectors X (t) = 0,1,2,3,... where t represents the time elapsed. The variable X (t) is treated as a random variable. Time series can be continuous or discrete (Brockwell & Davies, 2001). The mathematical expression describing the probability structure of a time series is termed as a stochastic process. Thus the sequence of observations of the series is actually a sample realization of stochastic process that produced it (Hipel & McLeod, 1994). A time series in general is affected by four main components, which can be separated from the observed data. These components are: Trend, Cyclical, Seasonal and Irregular components (Chatfield, 1996). Thus, considering the effects of these four components, two different types of models are generally used for a time series. These are Multiplicative and Additive models. In this, the current year's financial ratios are compared over a period of time. This is an indication of direction of the bank's direction of change.

Study Variables

In this study, the variables of interest in the problem under investigation are the credit procedures or framework and profitability of the bank. Specifically, the major indicators are considered as the credit processes and procedures that ensure effective credit management through which profit is measured. These are general loan, the bank's portfolio and the profits of the bank.

Independent Variables

Independent variable considered in this study is seen as the loan default which are measured using Sub-standard Assets, Doubtful Debts and Loss Assets. A sub-standard asset is an asset classified as an NPA for less than 12 months. A doubtful asset is an asset that has been non-performing for more than 12 months. Loss assets are loans with losses identified by the bank, auditor, or inspector that need to be fully written off. They typically have an extended period of non-payment, and it can be reasonably assumed that it will not be repaid.

Dependent Variables

The measures profitability reflect the interests of the firm's stakeholders (Margeritha & Supartika, 2016). Falavi and Abdoli (2015) and Feng, Morgan, and Rego (2015) suggested the use of multiple measures of profitability to reflect the diverse interests of stakeholders. Wang, Feng, and Lawton (2016) stated that a multi-dimensional perspective provides a more comprehensive picture of firm performance than does a single measure of profitability. In this study, I used multiple measures of profitability to reflect the diverse interests of different stakeholders of the bank. Dependent variable to be considered in this study is the profit of the bank. Profitability is a bank's first line of defense against unexpected losses, as it strengthens its capital position and improves future profitability through the investment of retained earnings. Profitability indicators, precisely the Return on Equity Capital (ROE), and the returns on Assets (ROA) are used to assess bank performance. An institution that persistently makes a loss will ultimately deplete its capital base, which in turn puts equity and debt holders at risk. All the strategies designed and activities

which are operated in the bank with the aim of maximizing the profit for the purpose of measuring profitability.

The return on asset (ROA) is the ratio of net income to total assets and is perhaps the single most useful ratio for assessing management's overall operating performance (BañosCaballero et al., 2012). The ROA also correlates to stock price and consequently implies that higher ROA yields greater value for shareholders (Mansoori & Muhammad, 2012). A higher ROA reflects a higher or better return on the firm's total investment (Yazdanfa & Öhman, 2014).

Return on Equity (ROE), common or ordinary shareholders are entitled to the residue profits; nevertheless, the net profit after tax represents their return (Rahmen et al., 2011). A return on shareholder's equity is calculated to see the profitability of owners' investment. The shareholders' equity or net worth will include paid up share capital, share premium and reserves and surplus less accumulated losses. Net Worth can also be found by subtracting total liabilities from the total assets. The ROI is net profit after taxes divided by shareholders equity which is given by net worth (Rahmen et al., 2011).

Empirical Models

A model is a simplified view of reality designed to enable a researcher describe the essence and inter relationship within the system or phenomenon is depicts (Onmumere, 2015). Regression analysis is used to predict the value of one variable on the basis of other variables. The technique involves developing a mathematical equation that describes a relationship between the variable to before casted, which is called the dependent variable, and variables that the statistician believes are related to the dependent variables which are mostly

denoted by X_1, X_2…,X_k (where k is the number of independent variables) (Bluman, 2009).

A multiple linear regression model will be used to test the significance of the influence of the independent variable on the dependent variable. A linear regression equation will be used to determine the effect of loan default on the performance of Kaaseman Rural bank in Ghana.

$Y = B_0 + B_1X_1 + e$…….…...…….. 1

Where: Y = Dependent variable

X_1 = Loans default;

B_0 = Constant

B_1 = Regression coefficient or change included in X value

e = Error term

Breaking the model down into various measures of financial performance:

ROE is a function of loan default (sub-standard asset, doubtful asset and loss asset). It is mathematically expressed as follows:

$$ROE_t = \beta_0 + \beta_1 SSA_t + \beta_2 DD_t + \beta_3 LA_t + \mu_t \quad (1)$$

Where; ROE= dependent variable, b_0= intercept term, b_1, b_2, b_3= regression coefficients to be determined, SSA (Sub-standard asset), DD (Doubtful debt), LA (Loss asset) and μ_t is the error term.

ROA is a function of loan default (sub-standard asset, doubtful asset and loss asset). It is mathematically expressed as follows:

$$ROA_t = \beta_0 + \beta_1 SSA_t + \beta_2 DD_t + \beta_3 LA_t + \mu_t \quad (2)$$

Econometric Estimation Technique

This study employs Granger-causality test based on augmented VAR modeling to test the effect of loan default on the financial performance of the Kaaseman Rural Bank Limited.

Unit Root Test

Unit root test is the starting point of time series analysis to determine the order of integration of the variables. When dealing with time series data, it is necessary to assess whether the series is stationary or not. The reason behind is that regression of a non-stationary series on another non-stationary series lead to what is known as spurious regression. Thus, in order to get rid of this abnormality, the unit root test was conducted on each of the variables under study to determine their stationary traits. The presence of unit root indicates that the variables are not stationary. The most common and popular one in econometric work to test the stationarity condition of the time series data is the Augmented Dickey Fuller (ADF) test suggested by Dickey and Fuller (1979) (Gujarati, 2006). The ADF test here consists of estimating the following regression: The starting point of the unit root process is:

Cointegration Test (Johansen Approach)

In conducting the stationarity test, if the series depict the presence of unit root, thus nonstationarity at the levels but stationarity after first difference, the cointegration relationship among the variables can be determined. The linear association between the variables can be estimated by using either the Johansen-Juselius approach (Johansen, 1988; Johansen-Juselius, 1992, 1999) or the Engle-Granger (1987) in order to eliminate spurious correlation and making wrong inferences. Finding the presence of cointegration relationship among the

variables can be interpreted as a long run equilibrium relationship (Antwi & Zhao 2013).

The Johansen technique allows for the possibility of assessing a long-term relationship between variables when they are all integrated of the same order. In presence of more than two variables, it is possible for more than one equilibrium relationship in the model. This leads to the problem of determining the number of cointegrating relationships between variables and the identification of these within the theoretical model structure.

The Johansen technique offers a solution to this problem as it allows for the testing and estimation of multiple long-run relationships, making it an improvement on the single-equation methodology earlier proposed by Engle and Granger (1987). The Johansen method also offers the advantage of allowing us to incorporate feedback effects between the variables, while also allowing for the separation of long-run equilibrium relationships and short-run dynamics.

The Johansen cointegration methodology entails a number of steps. Firstly, one has to test for the presence of a unit root in the data as the Johansen cointegration technique required data to be integrated of order one, I(1). The next step would be to test, using the maximum eigenvalue and trace statistic tests, whether the variables are cointegrated, i.e. if a long-run relationship exists between them as well as the number of cointegrating vectors or relationships that exist between them. Lastly, cointegrating vectors need to be estimated.

Ethical Consideration

Throughout the data collection process, the inquirer was able to identify and address all ethical issues that cropped up especially in establishing contact with, and use of the institution. First of all, permission from the sampled bank

was sought followed by the consent of the management of the bank. In the process, management of the bank was assured of confidentiality and anonymity. Also, all in-text citations have been acknowledged at the references.

Chapter Summary

This chapter discussed in detail the methodology of the study with emphasis on the descriptive design for the study and the study strategy. Issues relating to data collection and management were discussed in detail. The specific areas highlighted include how data was gathered, recorded and analyzed. The population of this study was drawn from various years financial statements of Kaaseman Rural Bank Limited. In all, 10 year period were sampled using the non-probability sampling methods. The study used the financial statements (secondary sources) as its main data-gathering instrument and analyzed using descriptive statistics with a focus on regression analysis. The next chapter focuses on the results and discussions.

CHAPTER FOUR

RESULTS AND DISCUSSION

Introduction

The purpose of the study was to examine the effect of loan default on the financial performance of Kaaseman Rural Bank. Specifically, it sought to find out the composition or component of loan default at Kaaseman Rural Bank, examine the trend of the loan default at the bank and to examine the effect of the loan default on the performance of the bank for the period 2009 to 2018. The study used the explanatory design as it seeks to explain the extent to which a loan default impact on the profitability of the bank. The study utilized only the secondary data from an accumulated published annual financial statements and reports of the Kaaseman Rural bank for the study period. Independent variable considered in this study is seen as the loan default which are measured using Sub-standard Assets, Doubtful Debts and Loss Assets. While the dependent variable used the profitability ratios return on asset (ROA) and return on equity (ROE) were used as proxies for financial performance of the bank. Quantitative analysis with emphasis on descriptive and inferential statistics was used to analysed the data. In the analysis, correlation and multiple linear regression model were used to test the significance of the influence of the independent variable on the dependent variable. This chapter presents results and discussions on the impact of loan default on banks performance in the Ghanaian banking industry from 2009-2018. The analyses emanating from the estimated models in chapter three are presented herein in accordance with the established objectives of the study.

Descriptive Statistics

Descriptive statistics of the independent and dependent variables are presented in Table 1.

Table 1: Descriptive Statistics of Variables

Variables	ROE	ROA	SSA	DA	AL
Mean	25.650	3.170	.2460	.1000	.0650
Median	24.350	3.150	.1250	.0900	.0650
Standard deviation	12.1812	1.3191	.23857	.04243	.02068
Minimum	10.9	1.3	.10	.04	.03
Maximum	45.8	5.1	.74	.16	.09

Source: Field data (2020)

Table 1 above highlights the descriptive statistics (means and standard deviations) for all the variables under consideration. It depicts the averages of both the dependent and independent variables for the period. The summary results of the descriptive statistics show of the variables captured in the regression model. These statistics were generated to give overall description of the data for any suspicious figure. The key descriptive measures are the mean, standard deviation, the minimum and maximum values of the variables. It tested a number of variables. Table 1 demonstrates that all variables have positive average values (mean and median). This is usual considering the arrangement included. Also, the minimum deviation of the variables of their means, as appeared by the standard deviation, gives an indication of moderate rate (fluctuation) of these variables within the period of study. For the study periods, the mean rate for ROE was 25.650 with standard deviation of 12.1812. The period of study of the mean of ROA was 3.170 with standard deviation being

1.3191. Again, the mean rate for sub-standard asset (SSA) was 0.2460 with standard deviation of 0.23857. Also, the mean rate for doubtful asset (DA) was 0.1000 with standard deviation being 0.04243. Lastly, the mean rate for asset loss (AL) was 0.0650 with standard deviation being 0.02068.

Table 2: Correlation Matrix

	ROE	ROA	SSA	DA	AL
ROE	1.000		.025	.283	.929
ROA		1.000	.142	.157	.951
SSA	.025	.142	1.000	-.453	-.009
DA	.283	.157	-.453	1.000	.380
AL	.929	.951	-.009	.380	1.000

Source: Field data (2020)

From the findings on the correlation analysis, the researcher conducted a Pearson Product Moment correlation. Table 2 presents the correlation matrix for all the continuous variables included to test the association between loan default and bank's financial performance. The evidence presented in the table indicates that some variables have significant correlations among the various continuous variables. From the findings on the correlation analysis between financial performance as measured by return on equity (ROE) and loan default variables (Sub-standard asset (SSA), doubtful asset (DA) and Asset loss AL) were found to be positive as shown by correlation coefficient factors of 0.025, 0.283, and 0.929 respectively. Similarly, the relationship between financial performance as measured by return on asset (ROA) and loan default variables (Sub-standard asset (SSA), doubtful asset (DA) and Asset loss AL) were found to be positive as shown by correlation coefficient factors of 0.142, 0.157, and .951 respectively.

On the other hand, the association between Sub-standard asset (SSA) and the other loan default variables doubtful asset (DA) and Asset loss (AL) were found to be negative as shown by correlation coefficient factors of -0.453, and -0.009 respectively. Again, the association between doubtful asset (DA) and the Asset loss AL) was found to be positive as shown by correlation coefficient factors of 0.380.

The Composition of Loan Default at Kaaseman Rural Bank Ltd

This objective sought to identify the composition of the loan default at the Kaaseman Rural Bank for the periods 2009 to 2018. As identified in the literature, three main components are used as proxies for loan default including sub-standard asset, doubtful asset and asset loss.

Table 3: Composition of Loan Default Analysis of the bank

Years	SSA	DA	AL	Total
2009	1344.6	26786	2112.38	30,242.98
2010	12316.85	15232	12568.4	40,117.25
2011	26014.78	13983	13126.18	53,123.96
2012	34473.07	29818	10484.53	74,775.6
2013	8827.21	39260	16546.5	64,633.71
2014	29531.46	19574.98	12286.61	61,393.05
2015	1904.23	8330.55	115942.23	126,177.01
2016	31018.26	23380.76	198,193.58	252,592.6
2017	11616	33190.26	14108	58,914.26
2018	10835	12494	13940	37,269
Total	167,881.46	222,049.55	409,308.41	799,239.42

Source: Field data (2020)

Table 3 shows the composition of the loan default of the bank for the period 2009-2018. The results show that the composition of loan default for the period under study constitute a total of GHC 799,239.42. Out of this amount, the Sub-standard Asset (SSA) constitutes GHC 167,881.46, which represents 21.0%. The Doubtful Asset (DA) also constitute GHC 222,049.55, representing 27.8% while the Asset Loss (AL) is GHC 409,308.41 representing 52.2%. The results showed that 2016 recorded the highest composite of the loan default with GHC 252,592.6 while the lowest being 2009 recording GHC 30,242.98. The loan default composition shows that since 2009, there has been an increase until 2016 when it started declining.

The Trend of loan default at Kaaseman Rural Bank Ltd

The Trend of Loan default is analysed using data from the year 2009 to 2018. To measure loan default at the bank, the study used sub-standard asset, doubtful assets and loss asset to determine the extent to which the bank experiences loan default. The data showed that sub-standard asset recorded high values followed by doubtful asset and the lowest rates recorded for asset loss component.

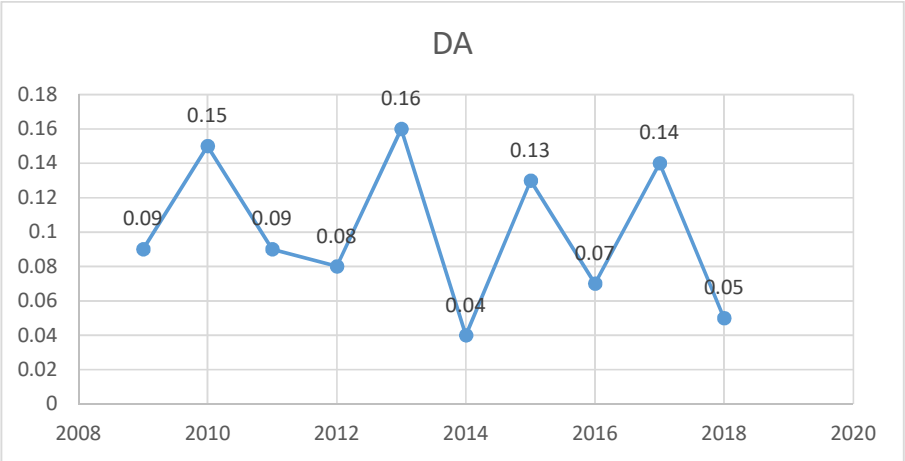

Figure 2: Trend of doubtful asset

Source: Field data (2020)

Figure 2 shows the trend of the bank's doubtful asset for the period 2009 to 2018. The results show that the highest rate was recorded in 2013 with 0.16% while the lowest rate was recorded in 2014 with a rate of 0.04%. The trend also shows that since 2009 the trend has been oscillating as it at a point in time increase and at another period it declines.

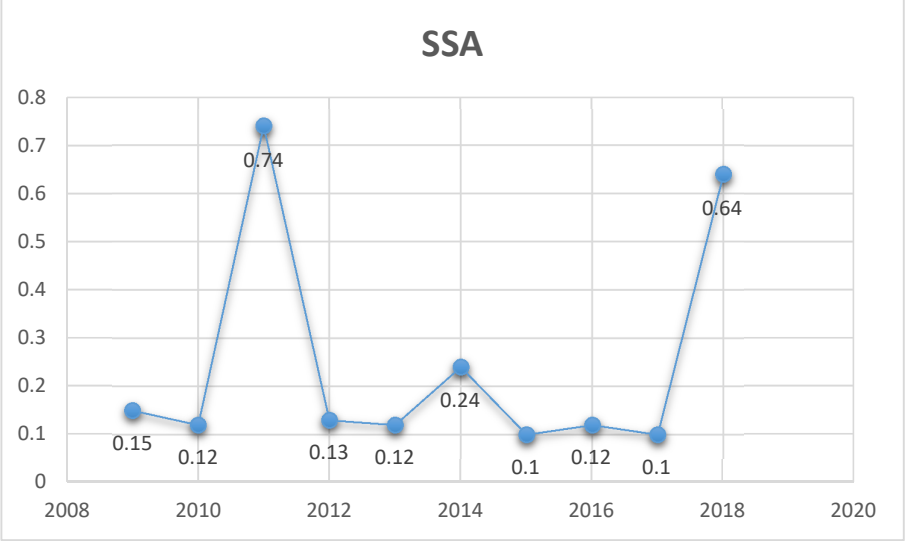

Figure 3: Trend of sub-standard asset

Source: Field data (2020)

Figure 3 shows the trend in terms of percentages for the performance of the sub-standard asset component of the loan default of the bank for the period 2009 to 2018. The results showed that the lowest rate was recorded in 2015 and 2017 with 0.1%, while the highest rate was recorded in 2011 with 0.74%. From the figure, since 2011 the trend has been declining to 2017 and then rose sharply in 2018.

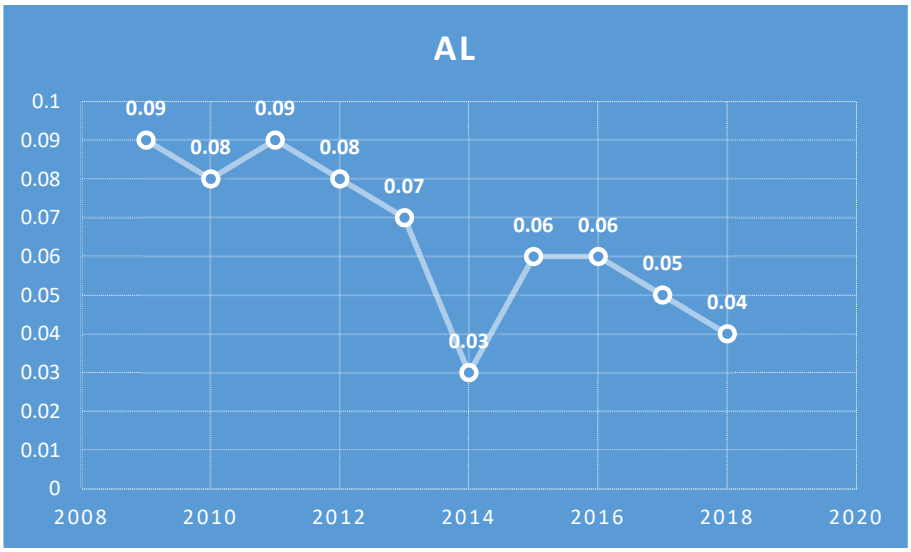

Figure 4: Trend of asset loss

Source: Field data (2020)

Figure 4 shows the trend of Asset loss component of the loan default of the bank for the period 2009 to 2018. From the figure, since 2011, there has been a downward trend of the Asset loss to 2014 until it went up in 2015 and 2016 and then declined from 2017 to 2018. The year 2014 recorded least with 0.03% compared with 2009 that recorded the highest with 0.09%.

Impact of loan default on financial performance of Kaaseman Rural Bank Ltd.

As the main objective of the study, it is believed that whenever loans are defaulted, it tends to have serious effects on the financial institutions such as the Kaaseman Rural Bank Limited. The impact of loan default on financial performance of Kaaseman are presented the headings: Loan default on Profit before tax; and Loan default on net assets.

A multiple linear regression model was used to test the significance of the influence of the independent variable on the dependent variable. A linear

regression equation will be used to determine the effect of loan default on the performance of Kaaseman Rural bank in Ghana.

$Y = B_0 + B_1X_1 + e$…….…..…….. 1

Where: Y = Dependent variable

X_1 = Loans default;

B_0 = Constant

B_1 = Regression coefficient or change included in X value

e = Error term

Breaking the model down into various measures of financial performance:

Impact of Loan Default on Bank Performance (ROE)

ROE is a function of loan default (sub-standard asset, doubtful asset and loss asset). It is mathematically expressed as follows:

$$ROE_t = \beta_0 + \beta_1 SSA_t + \beta_2 DD_t + \beta_3 LA_t + \mu_t \quad (1)$$

Where; ROE= dependent variable, b_0= intercept term, b_1, b_2, b_3= regression coefficients to be determined, SSA (Sub-standard asset), DD (Doubtful debt), LA (Loss asset) and μ_t is the error term.

Table 4: Model Summary statistics for Return on Equity

Model Summary statistics				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.932[a]	.868	.802	5.4223

a. Predictors: (Constant), lnAL, lnSSA, lnDA

b. Dependent Variable: ROE

Source: Field data (2020)

Table 4 shows an "R" (correlation coefficient) of 0.932 indicating that the relationship between loan default and bank performance is very strong. The

"R Square" of 0.866 shows that every component of the independent variable (loan default) explains the dependent variable (financial performance as measured by ROE) by 86.8%. That is every component of loan default accounts for only 86.8% variations in the dependent variable (financial performance as measured by ROE). Other factors accounts for the remaining 13.2% variations in the financial performance of Kaaseman. The Adjusted R Square which gives the percentage of variation explained by only those independent variables that in reality affect the dependent variable shows a figure of 0.802 or 80.2%. This means that per the adjusted R square, total loan default accounts for only 80.2% variations in the financial performance. The remaining 18.8% is due to other factors. This means that other factors rather than loan default accounts for lesser variations in financial performance of Kaaseman.

Table 5: ANOVA[b] statistics for Return on Equity

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1159.040	3	386.347	13.141	.005[b]
	Residual	176.405	6	29.401		
	Total	1335.445	9			

a. Predictors: (Constant), lnAL, lnSSA, lnDA

b. Dependent Variable: ROE

Source: Field data (2020)

Table 5 shows that there is a strong relationship between loan default and financial performance as measured by ROE, the relationship is statistically significant as evidenced by a significance figure of 0.005.

Table 6: Coefficient of Regression of Return on Equity

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-8.653	7.233		-1.196	.277
	lnSSA	-.231	8.671	-.005	-.027	.980
	lnDA	-24.030	52.710	-.084	-.456	.665
	lnAL	565.584	96.376	.960	5.869	.001

a. Dependent Variable: ROE

Source: Field data (2020)

Table 6 shows that Unstandardized "B" coefficient of the constant variable is -8.653 with the standard error of 7.233. The standardized coefficient Beta of the independent variable of sub-standard asset (lnSSA) was -0.005, doubtful asset (lnDA) was -0.084, and asset loss (lnAL) was 0.960. The Beta values of sub-standard asset (lnSSA) was -0.005, doubtful asset (lnDA) was -0.084 show that there is a relationship between loan default variables and financial performance. However, this relationship is negative and very weak. On the other hand, the Beta value of asset loss (lnAL) which is 0.960 show that there is a positive and significant relationship between loan default variable (lnAL) and financial performance.

Impact of Loan Default on Financial Performance (ROA)

ROA is a function of loan default (sub-standard asset, doubtful asset and loss asset). It is mathematically expressed as follows:

$$ROA_t = \beta_0 + \beta_1 SSA_t + \beta_2 DD_t + \beta_3 LA_t + \mu_t \quad (2)$$

Table 7: Regression Results: Model Summary for Return on Asset

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.978[a]	.956	.933	.3407	.956	42.980	3	6	.000

a. Predictors: (Constant), AL, SSA, DA

Source: Field data (2020)

Table 7 shows an "R" (correlation coefficient) of 0.978 indicating that the relationship between loan default and bank performance is very strong. The "R Square" of 0.956 shows that every component of the independent variable (loan default) explains the dependent variable (financial performance as measured by ROA) by 95.6%. That is every component of loan default accounts for only 95.6% variations in the dependent variable (financial performance as measured by ROA). Other factors accounts for the remaining 4.4% variations in the financial performance of Kaaseman. The Adjusted R Square which gives the percentage of variation explained by only those independent variables that in reality affect the dependent variable shows a figure of 0.933 or 93.3%. This means that per the adjusted R square, total loan default accounts for a whopping 93.3% variations in the financial performance. The remaining 4.4% is due to other factors. This means that other factors rather than loan default accounts for lesser variations in financial performance of Kaaseman.

Table 8: Regression Results for ROA: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.965	3	4.988	42.980	.000[b]
	Residual	.696	6	.116		
	Total	15.661	9			

a. Dependent Variable: ROA b.

b. Predictors: (Constant), AL, SSA, DA

Source: Field data (2020)

Table 8 shows that there is a strong relationship between loan default and financial performance as measured by ROA, the relationship is statistically significant as evidenced by a significance figure of 0.000.

Table 9: Coefficient of Regression for Return on Asset

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-.531	.454		-1.168	.287
	SSA	.314	.545	.057	.576	.586
	DA	-6.499	3.312	-.209	-1.962	.097
	AL	65.746	6.055	1.031	10.858	.000

a. Dependent Variable: ROA

Source: Field data (2020)

Table 9 shows that Unstandardized "B" coefficient of the constant variable is -0.531 with the standard error of 0.454. The standardized coefficient Beta of the independent variable of sub-standard asset (SSA) was 0.057, doubtful asset (DA) was -0.209, and asset loss (AL) was 0.960. The Beta values

of sub-standard asset (SSA) was -0.005, doubtful asset (DA) was -0.084 and asset loss (AL) was 1.031 show that there is a relationship between loan default variables and financial performance. However, this relationship is very weak except asset loss that was strong.

Hypothesis Testing Results

The following summarizes all the results in terms of the hypothesis that were found to be true.

H2: there is a significant relationship between Sub-standard Asset and the banks performance (Return on equity). This hypothesis is rejected because the beta value of independent variable (Sub-standard Asset) is -.005 with t value -.027 and significant level of 0.980. Thus, as the significant level is greater than 0.05.

H3: there is a significant relationship between Sub-standard Asset and the banks performance (Return on asset). This hypothesis is rejected because the beta value of independent variable (Sub-standard Asset) is 0.057 with t value 0.576 and significant level of 0.586. Thus, as the significant level is greater than 0.05.

H4: there is a significant relationship between doubtful Asset and the banks performance (Return on equity). This hypothesis is rejected because the beta value of independent variable (doubtful Asset) is -0.084 with t value -0.456 and significant level of 0.665. Thus, as the significant level is greater than 0.05.

H5: there is a significant relationship between doubtful Asset and the banks performance (Return on asset). This hypothesis is rejected because the beta value of independent variable (doubtful Asset) is -0.209 with t value -1.962 and significant level of 0.097. Thus, as the significant level is greater than 0.05.

H6: there is a significant relationship between Asset loss and the banks performance (Return on equity). This hypothesis is accepted because the beta value of independent variable (asset loss) is .960 with t value 5.869 and significant level of 0.001. Thus, as the significant level is lesser than 0.05.

H7: there is a significant relationship between Asset loss and the banks performance (Return on asset). This hypothesis is accepted because the beta value of independent variable (asset loss) is 1.031 with t value 10.858 and significant level of 0.000. Thus, as the significant level is lesser than 0.05.

Unit Root Test

These tests were carried out simultaneously to ensure the variables enter their corresponding models in a non explosive form and are robust. Also, they were carried out to ensure that the variables under investigation satisfy the preconditions for the econometric techniques adopted for the study. The variables were tested in their log levels. Non-stationary variables are not very useful in economics. The only exception is when their linear combination makes them stationary or when they are cointegrated. The establishment of relationships is very important in macroeconomic analysis, therefore when variables are non-stationary, they tend to produce unrelated regressions or spurious relationships. An important step to making non-stationary variables stationary is by differencing them. The variables were tested in their first difference to see whether they contain unit roots, using the same ADF and PP procedures. The stationarity characteristics of the variables were tested by the ADF and PP procedures and the results are presented in Table 10 below.

Table 10: Test for Unit Root in the Variables at their Log Levels

	ADF [I (0)]		PP 1 [*I* (1)]	
Variables	t-statistic	5% critical value	Adj. t-statistic	5% critical value
ROE	-2.962836	-3.540328	-5.092125	-3.540328
ROA	-2.255898	-3.544284	-4.255898	-3.544284
SSA	-2.679188	-3.536601	-4.788471	-3.568379
DA	-2.949801	-3.536601	-8.874854	-3.540328
AL	-2.095500	-3.536601	-6.327220	-3.540328

Source: Field data (2020)

Table 10 presents the ADF unit root test results. The results of the ADF testing for the variables reported in Table 10 indicates that all the variables were non-stationary in levels, I (0), but become stationary after first differencing, or integrated of order one, I(1), which provided a necessary, but not sufficient rationale for estimating cointegration. As reported in the ADF test, none of the variables are stationary in their level, suggesting that the hypothesis of a unit root cannot be rejected in all variables in level [I (0)]. These results conclude that all variables are non-stationary. The variables in consideration however, as reported in Table 10 are stationary in the first differences. This means that the variables are integrated of order 1 [*I* (1)]. This also suggests that the variables are potentially cointegrated.

Test for Cointegration

The first difference of the logs of the variables of ROE, ROA, SSA, DA and AL were used for the cointegration test. The cointegration test is performed basically to ascertain whether long run relationships exist between the variables.

Table 11: Johansen Tests for Cointegration

Maximum Rank	Eigenvalue	trace statistics	5% critical value
0	0.808290	171.0570	134.6780
1	0.654748	111.5933	103.8473
2	0.593101	73.30792	76.9727
3	0.414046	40.93707	54.07904
4	0.254373	21.69459	35.19275
5	0.160065	4.848017	9.164546

Source: Field data (2020)

Results of Johansen tests for the number of cointegrating ranks are presented in Tables 11. The results of the test indicate the rejection of the null hypothesis which states there is no cointegrating vector. This suggests the acceptance of alternative hypothesis, that there exists cointegration among the variables captured in the cointegration regression. The results further indicate that there is no more than one cointegrating vector, suggesting that there is one cointegrating rank. This is because the value of the trace statistic at one rank is 111.5933, which is greater than its critical value of 103.8473 at 5% level of significance.

Discussion of Results

This section presents the discussion of the results which has been done in relation with the study questions and with reference to previous studies.

Research Question One: What is the composition or component of loan default at Kaaseman Rural Bank Ltd?

Results from the composition of the loan default of the bank for the period 2009-2018 show that the composition of loan default for the period under

study constitute a total of GHC 799,239.42. Out of this amount, the Sub-standard Asset (SSA) constitutes GHC 167,881.46, which represents 21.0%. The Doubtful Asset (DA) also constitute GHC 222,049.55, representing 27.8% while the Asset Loss (AL) is GHC 409,308.41 representing 52.2%. The results showed that 2016 recorded the highest composite of the loan default with GHC 252,592.6 while the lowest being 2009 recording GHC 30,242.98. The loan default composition shows that since 2009, there has been an increase until 2016 when it started declining.

Research Question Two: What has been the trend of loan default at Kaaseman Rural Bank Ltd for the past ten years?

The results show the trend of the bank's doubtful asset for the period 2009 to 2018 and indicated that the highest rate was recorded in 2014 with 0.09% while the lowest rate was recorded in 2009 and 2011 with a rate of 0.03%. The trend also shows that since 2009 the trend has been oscillating as it at a point in time increase and at another period it declines.

The results show the trend in terms of percentages for the performance of the sub-standard asset component of the loan default of the bank for the period 2009 to 2018. The results showed that the lowest rate was recorded in 2015 and 2017 with 0.1%, while the highest rate was recorded in 2011 with 0.74%. From the figure, since 2011 the sub-standard asset component of the loan default of the bank trend has been declining to 2017 and then rose sharply in 2018.

Results of the trend of Asset loss component of the loan default of the bank for the period 2009 to 2018. From the figure, since 2011, there has been a downward trend of the Asset loss to 2014 until it went up in 2015 and 2016 and

then declined from 2017 to 2018. The year 2014 recorded least with 0.03% compared with 2009 that recorded the highest with 0.09%. The findings agree with Otoo, Takyi-appiah and Wiah (2015) that found that the amount of loan default had an increasing trend with the two years forecast of the amount of loan default oscillated initially and remained constant from 2016 onwards.

Research Question Three: What is the impact of loan default on financial performance of Kaaseman Rural Bank Ltd?

Research studies such as Karim et al. (2010), Obamuyi, (2007), Nguta & Huka, (2013), Nawaz et al., (2012), Fidrmuc & Hainz (2009), Chelagat (2012) and Aballey (2009) have shown that the effect of bad loans on the bank in terms of net financial performance (i.e. return on investment/net profit) and lending potential (i.e. annual loan size) is practical and realistic. These studies would be identified from the perspectives of foreign countries and Ghana. The basic premise of econometric analysis is to establish the extent of the relationship if any between the financial performance of the bank as measured by variables such as Return on Assets (ROA), and Return on Equity (ROE) and a number of independent variables such as Sub-standard Asset (SSA), Doubtful Asset (DA), and Asset Loss (AL) of the bank. Two statistical analysis was performed using correlation and regression.

From the findings on the correlation analysis between financial performance as measured by return on equity (ROE) and loan default variables (Sub-standard asset (SSA), doubtful asset (DA) and Asset loss AL) were found to be positive as shown by correlation coefficient factors of 0.025, 0.283, and 0.929 respectively. Similarly, the relationship between financial performance as measured by return on asset (ROA) and loan default variables (Sub-standard

asset (SSA), doubtful asset (DA) and Asset loss AL) were found to be positive as shown by correlation coefficient factors of 0.142, 0.157, and .951 respectively. The findings contradict Asantey and Tengey (2014) which found that there is a high negative correlation between bad loans and lending potentials, return on investment and net profit. Again, the findings do not support Awo and Akotey (2012) study that found a negative relationship between NPLs and financial performance of Naara Rural Bank.

The regression analysis showed significant relationship between loan default and financial performance as suggested by the ANOVA results. For instance, the results show that there is a strong relationship between loan default and financial performance as measured by ROA, the relationship is statistically significant as evidenced by a significance figure of 0.000. Similarly, results from the ANOVA statistics show that there is a strong relationship between loan default and financial performance as measured by ROE, the relationship is statistically significant as evidenced by a significance figure of 0.005. This finding indicates that a higher loan default necessarily affect the financial performance of the bank as measured in the ROE and ROA. The findings confirm Ntiamoah, Oteng and Opoku (2014) study that examined Loan default rate and its impact on profitability in financial institutions. Their results of the study showed that there is high positive correlation between the constructs of loan default rate and profitability of the various micro-finance institution.

To address the question of which independent variables most influence the financial performance of the bank as measured by ROE, the results show that the standardized coefficient Beta of the independent variable of Sub-standard Asset (SSA) was -0.005, Doubtful Asset (DA) was -0.084, and asset

loss (AL) was 0.960. The Beta values of Sub-standard Asset (SSA) was -0.005, Doubtful Asset (DA) was -0.084 show that there is a relationship between loan default variables and financial performance. However, this relationship is negative and very weak. On the other hand, the Beta value of Asset Loss (AL) which is 0.960 show that there is a positive and significant relationship between loan default variable (AL) and financial performance. Similarly, the results show that Unstandardized "B" coefficient of the constant variable is -0.531 with the standard error of 0.454. The standardized coefficient Beta of the independent variable of sub-standard asset (SSA) was 0.057, doubtful asset (DA) was -0.209, and asset loss (AL) was 0.960. The Beta values of sub-standard asset (SSA) was -0.005, doubtful asset (DA) was -0.084 and asset loss (AL) was 1.031 show that there is a relationship between loan default variables and financial performance. However, this relationship is very weak except asset loss that was strong.

Chapter Summary

The study sets to examine the impact of loan default on financial performance of Kaaseman Rural Bank Limited. To do that, both correlation and regression statistical analysis was performed. The descriptive statistics showed that the mean rate for ROE was 25.650 with standard deviation of 12.1812. The period of study of the mean of ROA was 3.170 with standard deviation being 1.3191. Again, the mean rate for sub-standard asset (SSA) was 0.2460 with standard deviation of 0.23857. Also, the mean rate for doubtful asset (DA) was 0.1000 with standard deviation being 0.04243. Lastly, the mean rate for asset loss (AL) was 0.0650 with standard deviation being 0.02068. The composition of loan default at the bank showed that the Sub-standard Asset (SSA) constituted 21.0%, the Doubtful Asset (DA) also constituted 27.8% while the

Asset Loss (AL) constituted 52.2%. The results showed a positive relationship exists between loan default variables i.e. Sub-standard Asset, Doubtful Asset and Asset Loss with bank's financial performance variables i.e. Return on Equity (ROE) and Return on Asset (ROA). The regression analysis showed significant relationship between loan default and financial performance as suggested by the ANOVE results ($p<0.005$).

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

This is the final chapter of the study report. The summary of the research report is presented here. Based on the key findings, conclusions are reached to aid the generation of appropriate recommendations to resolve the research questions formulated to guide the study.

Summary

The main of the study was to examine the effect of loan default on the financial performance of Kaaseman Rural Bank. Specifically, it sought to find out the composition or component of loan default at Kaaseman Rural Bank, examine the trend of the loan default at the bank and to examine the effect of the loan default on the performance of the bank for the period 2009 to 2018. The study used the explanatory design as it seeks to explain the extent to which a loan default impact on the profitability of the bank. The study utilized only the secondary data from an accumulated published annual financial statements and reports of the Kaaseman Rural bank for the study period. Independent variable considered in this study is seen as the loan default which are measured using Sub-standard Assets, Doubtful Debts and Loss Assets. While the dependent variable used the profitability ratios return on asset (ROA) and return on equity (ROE) were used as proxies for financial performance of the bank. Quantitative analysis with emphasis on descriptive and inferential statistics was used to analysed the data. In the analysis, correlation and multiple linear regression model were used to test the significance of the influence of the independent variable on the dependent variable.

The composition of loan default at Kaaseman Rural Bank Ltd

The study observed that the composition of loan default for the period under study constitute a total of GHC 799,239.42. Out of this amount, the Sub-standard Asset (SSA) constitutes GHC 167,881.46, which represents 21.0%. The Doubtful Asset (DA) also constitute GHC 222,049.55, representing 27.8% while the Asset Loss (AL) is GHC 409,308.41 representing 52.2%. The results showed that 2016 recorded the highest composite of the loan default with GHC 252,592.6 while the lowest being 2009 recording GHC 30,242.98. The loan default composition shows that since 2009, there has been an increase until 2016 when it started declining.

The trend of loan default at Kaaseman Rural Bank Ltd

The study observed that trend of the bank's doubtful asset for the period 2009 to 2018 and indicated that the highest rate was recorded in 2014 with 0.09% while the lowest rate was recorded in 2009 and 2011 with a rate of 0.03%. The trend also shows that since 2009 the trend has been oscillating as it at a point in time increase and at another period it declines.

The study observed that since 2011 the Sub-standard Asset component of the loan default of the bank trend has been declining to 2017 and then rose sharply in 2018.

The findings regarding the trend of Asset Loss component of the loan default of the bank for the period 2009 to 2018 showed that since 2011, there has been a downward trend of the Asset loss to 2014 until it went up in 2015 and 2016 and then declined from 2017 to 2018.

Impact of loan default on financial performance of Kaaseman Rural Bank Ltd.

Findings from the correlation analysis between financial performance variables Return on Equity (ROE) and ROA, and loan default variables (Sub-standard asset (SSA), doubtful asset (DA) and Asset loss AL) were found to be positive as shown by correlation coefficient factors.

The regression analysis showed significant relationship between loan default and financial performance as suggested by the ANOVE results ($p<0.005$).

The summary of individual independent variables impacting or influencing the financial performance (ROE and ROA) showed that there is no significant relationship between Sub-standard Asset and the banks performance at ($p<0.005$).

Again, the study revealed that there is no significant relationship between doubtful Asset and the banks performance (ROE and ROA) leading to the rejection of the hypothesis because of the beta value -0.084, -0.209 with t value -0.456, -1.962 and significant level of 0.665, 0.097 respectively. Thus, as the significant level is greater than 0.05.

The study revealed that there is a significant relationship between Asset loss and the banks performance (ROE and ROA). This implied that the two hypotheses are accepted because the beta value is .960, 1.031 with t value 5.869, 10.858 and significant level of 0.001, 0.000 respectively. Thus, as the significant level is lesser than 0.05.

Conclusions

Findings on the composition of loan default at the bank showed that the Sub-standard Asset (SSA) constituted 21.0%, the Doubtful Asset (DA) also constituted 27.8% while the Asset Loss (AL) constituted 52.2%.

The findings show that since 2011 the Sub-standard Asset component of the loan default of the bank trend has been declining to 2017 and then rose sharply in 2018. Again, findings of trend of the bank's doubtful asset for the period 2009 to 2018 and indicated that the highest rate was recorded in 2014 while the lowest rate was recorded in 2009 and 2011. The trend also shows that since 2009 the trend has been oscillating as it at a point in time increase and at another period it declines. The findings regarding the trend of Asset Loss component of the loan default of the bank for the period 2009 to 2018 showed that since 2011, there has been a downward trend of the Asset loss to 2014 until it went up in 2015 and 2016 and then declined from 2017 to 2018.

The findings showed a positive relationship between loan default variables i.e. Sub-standard Asset, Doubtful Asset and Asset Loss with bank's financial performance variables i.e. Return on Equity (ROE) and Return on Asset (ROA). The regression analysis showed significant relationship between loan default and financial performance as suggested by the ANOVE results ($p<0.005$). Specifically, the summary of individual independent variables impacting or influencing the financial performance (ROE and ROA) showed that there is no significant relationship between Sub-standard Asset and the banks performance at ($p<0.005$). Again, the study revealed that there is no significant relationship between doubtful Asset and the banks performance

(ROE and ROA). Moreover, the study found that there is a significant relationship between Asset loss and the banks performance (ROE and ROA).

Recommendations

Based on the findings and conclusions drawn, the following recommendations are made:

The findings showed a positive relationship between loan default variables i.e. Sub-standard Asset, Doubtful Asset and Asset Loss with bank's financial performance variables i.e. Return on Equity (ROE) and Return on Asset (ROA). Based on this findings, the study recommends to the management of Kaaseman Rural Bank Limited to focus on these components of loan default as it would help identify the components that have relationship with the performance of the bank.

Again, study revealed that the Asset Loss (AL) was high representing more than half of the loan default components and have significant effect on the bank's financial performance over the study period. The study therefore recommends to the management of Kaaseman Rural Bank Limited to reduce the high levels of Asset Loss of the bad loan recorded in the loan books.

The bank should also use credit reference agencies in line with the Credit Reporting Act, 2007 (Act 726) for the purpose of determining the creditworthiness of borrowers as a means of minimizing bad loans. It is known that, these Credit bureaus keep information on people for the purpose of assessing their creditworthiness in the granting of credit to them. This would enable the bank identify good customers and thus minimize loan default. The management of the bank should therefore ensure that all credit officers and loan

approving authorities utilize the services of these institutions when conducting credit appraisals before loans are granted.

The bank should establish a product research and development department to study the performance of all the Bank's products so that those which are not doing well can be repackaged to make them marketable on the market.

The Bank should also resource the Recovery Department to enable them carry out their functions very well to recover the overdue loans. The Department should also be involved in the monitoring of loans from the day the loans are granted.

Suggestions for Future Studies

The current study was limited only one bank among the many rural banks that conglomerate to form the Apex bank limited. It is suggested that future studies should add more of the banks preferably, comparing the performing and non-performing rural banks in other regions of the country. Also, other variables such as return on capital employed (ROCE) and net income management for profitability, and other variables for loan default should be included in future studies. Furthermore, in order to get the true picture of the composition and trend as well as the causes of loan default on the bank's performance, future studies should adopt the mixed method research design to generate comprehensive data for comprehensive conclusions on the matter.

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APPENDIX A

RATIOS FROM THE FINANCIAL STATEMENT (2012-2018)

YEARS	ROE	ROA	SSL	DL	AL
2009	45.8	4.7	0.15	0.09	0.09
2010	39.1	3.4	0.12	0.15	0.08
2011	38.1	5.1	0.74	0.09	0.09
2012	28.9	4.6	0.13	0.08	0.08
2013	23.8	3.2	0.12	0.16	0.07
2014	10.9	1.3	0.24	0.04	0.03
2015	24.9	3.1	0.1	0.13	0.06
2016	18.7	2.7	0.12	0.07	0.06
2017	12.6	1.7	0.1	0.14	0.05
2018	13.7	1.9	0.64	0.05	0.04